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Keiko Shiraishi

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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

BLACKWELL, JAMES H

ART UNIT

PAPER NUMBER

2176

NOTIFICATION DATE

DELIVERY MODE

03/16/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com
jarmstrong@oliff.com

Office Action Summary	Application No. 10/665,794	Applicant(s) SHIRAISHI ET AL.	
	Examiner James H. Blackwell	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/28/2010 has been entered.

Claims 1-7, and 14-24 are pending.

Claims 1-3, 20 and 24 are independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 17-20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robles et al. (hereinafter Robles, U.S. Patent Application Publication No. 2002/0198904 filed 06/22/2001, published 12/26/2002) in view of Sklut et al. (hereinafter Sklut, U.S. Patent No. 5,790,119 filed 10/30/1995, issued 08/04/1998).

In regard to independent Claim 1, Robles discloses:

Note: For purposes of examination, the phrase *“linking information making device”* is a device for generating workflows. The workflows combine information obtained by a *“service list acquisition unit,”* and a *“interface information acquisition unit,”* and are assembled or “linked together” by a *“linking information making unit,”* where information obtained by both the *“service list acquisition unit”* and *“interface information acquisition unit”* are presented in a user interface and are subject to user interaction to create or generate a workflow.

- *A linking information making device* (at least Abstract → Robles describes a distributed document production system that allows a user to generate or produce a document using any number of available services available on any number of available devices), *comprising*:
 - *a service search server comprising*:
 - *a service list acquisition section which acquires a service list expressing respective services each of which execute predetermined processings on document data, the respective services being provided by a plurality of currently-available service processing devices* (at least Page 3, Paragraphs [0028], [0031-0035] → Robles describes a services engine (i.e. *section*) that retrieves information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services, and options for those

services. Robles also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s).

This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s)).

- *a client terminal in communication with the service list acquisition section* (see Figures 1 and 2 → Robles teaches a production client in communication with a production server which, in turn, is in communication with production devices), *the client terminal comprising:*
 - *an interface information acquisition section which acquires, for each of the currently-available services being provided, (at least Page 3, Paragraph [0028] → as noted above, Robles implies that instructions for generating user accessible controls (e.g., a GUI, which presumably contains interface information since the GUI is controlling the device) pertaining to each device, as well as the name or other location identifier of each device capable of providing the services, may be included in this information obtained directly from the device(s)).*

Note: For purposes of examination, the phrase “*predetermined processing(s)*” used in the limitation below, describes predefined services that each device is capable of performing.

- *a respective piece of interface information including a method by which the corresponding predetermined processing is started* (at least Page 4, Paragraph [0039]; Figures 10-13 → Robles teaches that a print command can be issued (e.g. *a method by which the predetermined processing is started*), which acts to start the predetermined processing).
- *a linking information making section which makes linking information to be used for linking the predetermined processings based on the interface information which has been acquired by the interface information acquisition section, and transmits the linking information* (at least Figure 12A → Robles provides a user interface through which various services are listed (item 106) and can be selected and options set for each service by a user. Selected services and options are viewable by the user (item 108). Multiple services can be assembled (see Figures 12D-F) into a list of instructions (the beginnings of a workflow). At this point, the user can choose to “link” these instructions by selecting the Preview button (item 112). Selecting the “ok” button (item 114) takes this

assembled list of instructions to the next step (see Figure 13) where the system determines what devices can carry out the instructions.

It is presumed that by selecting the “ok” button (item 114) the user invokes the start of a linking process that will end with the creation of a workflow. By selecting the "ok" button (item 156) associated with this user interface, the user presumably adds the additionally selected content to the existing list and the process of “linking” the instructions and the devices together into a workflow is completed. The resulting workflow is then transmitted to the previously selected device(s) to be executed)),

- *the linking information including information to be displayed on respective screens of a one or more of the currently-available service processing devices and to be selected by a user operating one of the screens when the user instructs to start linking the predetermined processings (as described above, Robles provides a user interface that displays services, options for services, and devices for which those services/options can be carried out and that can be selected by a user) to generate a workflow that is then submitted to the device(s) for processing.*

Thus, Robles provides a user interface whereby a user can cause the linking of services, options for each of the services, and devices capable of carrying out the services to take place.

- *an instruction sheet management server comprising:*
 - *a management section which stores the transmitted linking information and further transmits the stored linking information to the one or more of the currently-available service processing devices for displaying on the screen based on a request from the currently-available service processing devices (at least Figure 14 → Robles depicts a production manager that allows the user to obtain the status of devices carrying out their assigned processing(s) on selected documents. The user can interact with this interface).*

Robles fails to explicitly disclose:

- *wherein the client terminal further comprises a display which displays a first window including a first icon corresponding to first interface information acquired by the interface information acquisition section, a second window including a second icon corresponding to a linking pattern, and a third window including linked first and second icons dragged and dropped from the first and second windows by the user, and the linking information making section makes the linking information in accordance with the linked first and second icons in the third window.*

However, Sklut describes the creation of a “metaphor template” on a viewing screen with user interface (see Figures

12 and 13) as part of a method for designing a job ticket (i.e. workflow) for printing (see Abstract; Col. 17, line 11 through Col. 19, line 7) . The “metaphors” correspond to graphical icons which represent, for instance, real devices such as a printer, scanner, fax device, etc. These device metaphor elements can be linked with connector elements to construct a workflow or metaphor template. The device metaphors are coupled to the actual devices they represent and are also capable of indicating the current status/state/health of their associated devices (see Col. 19, line 60 through Col. 2, line 44; Figures 11-13). The user interface taught by Sklut appears as a single window and metaphors are added to the interface via pull-down or hierarchical menus (see Col. 18, lines 19-35) as opposed to the invention (see Applicants’ Figure 4) however this is a design choice. Both Sklut and the instant invention contain icon-based program and control components that can be dragged and dropped and connected to construct a workflow that can then be executed to carry printing processes.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Robles and Sklut as both inventions describe systems that allow a user to design and implement procedures based on a visual

programming paradigm. Adding Sklut to Robles provides Robles with a visual programming user interface by which a user can design and execute a process such as a printing workflow.

Regarding independent Claims 2 and 3, Claims 2 and 3 merely recite a method, and program on a recording medium operable (executable) on the device of Claim 1. Thus, Robles in view of Sklut discloses every limitation of Claims 2 and 3, and provides proper motivation, as indicated in the above rejection of Claim 1.

In regard to dependent Claim 4, Robles discloses:

- *A document processing system, comprising:*
 - *the linking information making device according to claim 1 which acquires the service list transmitted from a search device and the pieces of the interface information from the currently-available service processing devices via the search device; and (at least Page 3, Paragraph [0028] → Robles describes a services engine (a search device) that obtains information from service devices directly, and is further capable of periodically updating that information), further comprising:*
 - *a plurality of currently-available service processing devices which provide services for executing predetermined processings of document data and transmit the pieces of the interface information to the search device (at least Page 3, Paragraph [0028]; Figure 8 →*

in Figure 8, Robles depicts a plurality of production devices capable of providing services and transmitting services/capabilities to the services engine upon request).

- *the search device provided with:*
 - *a service information storage section for storing the pieces of the interface information which have been transmitted from the currently-available service processing devices (at least Page 3, Paragraph [0028] → Robles teaches a services database is available to provide electronic storage to device services/options available on a network or elsewhere).*
 - *a search section for searching services corresponding to services, for which search has been requested, using the pieces of the interface information which have been stored in the service information storage section (at least Page 3, Paragraph [0028] → Robles describes a services engine that retrieves (after locating) information on services directly, or alternatively obtains the information from the services database), and*
 - *a transmission section which transmits the service list based on the search results of the search section (at least Page 3, Paragraph [0031] → Robles teaches a device selector 60 queries services database 38 or devices 16 directly and identifies a device or devices 16 capable of providing the selected services. In other*

words, the devices are “searched” for, identified, and their available services, options, interface information is transmitted back to the system such that the interface generator 43, can generate a user interface with user accessible controls for selecting between the identified device or devices).

In regard to dependent Claim 5, Robles discloses:

- *the transmission section of the search device transmits the service list ..., to the linking information making device (at least Page 3, Paragraph [0032] → Robles teaches a plan generator 68 that is responsible for merging formatted production request 44 with selected services 46, as illustrated in Figure 3 under the control of a user who starts the process. Device drivers 70 translate the production plan 44 into a specialized set of commands for each selected production device 16 handling production plan 44. Linking in the system of Robles is at least begun by a user interacting with the system.*

In regard to dependent Claim 6, Robles discloses:

- *the currently-available service processing devices transmit pieces of input information and pieces of output information on services, service names, and service information location as the interface information (at least Pgs. 2-3, Paragraphs [0027-0028], [0031] → Robles teaches that service devices via*

SNMP transmit, at least upon request, information on their services as well as interface information, their location, and identification).

In regard to dependent Claim 7, Robles discloses:

- *interface information acquisition section of the linking information making device acquires pieces of service information location for accessing the respective currently-available service processing devices, from the search device, and acquires pieces of interface information from the currently-available service processing devices based on pieces of the acquired service information location* (at least Page 3, Paragraphs [0028], [0031] → Robles teaches that the services engine includes a services locator 58 and device selector 60. The services locator 58 obtains services and interface information from each of the devices either via database or directly).

In regard to dependent Claim 17, Robles discloses:

- *the management section stores a plurality of the linking information as a plurality of workflows* (at least Page 5, Paragraph [0045]; Figure 14 → Robles provides a user interface which lists a plurality of linking information as production plans (i.e. workflows) that a user can interact with. These workflows are queued and hence are stored by the system, at least temporarily).

Regarding independent Claims 18 and 19, Claims 18 and 19 merely recite a method, and program on a recording medium operable (executable) on the device of Claim 17. Thus, Robles in view of Skjut discloses every limitation of Claims 18 and 19, and provides proper motivation, as indicated in the above rejection of Claim 17.

In regard to independent Claim 20, Robles discloses:

Note: For purposes of examination, the phrase *“linking information making device”* is a device for generating workflows. The workflows combine information obtained by a *“service list acquisition unit,”* and a *“interface information acquisition unit,”* and are assembled or “linked together” by a *“linking information making unit,”* where information obtained by both the *“service list acquisition unit”* and *“interface information acquisition unit”* are presented in a user interface and are subject to user interaction to create or generate a workflow.

- *A computer-readable recording medium that stores a program for controlling a computer to execute a processing for making linking information (at least*
Abstract → Robles *describes a distributed document production system that allows a user to generate or produce a document using any number of available services available on any number of available devices), the program including instructions for controlling the computer to execute:*

- *acquiring, from currently-available service processing devices through a network, pieces of service information expressing different types of processings executed by the currently-available service processing devices on document data* (at least Page 3, Paragraphs [0028], [0031-0035] → Robles describes a services engine (i.e. *unit*) that can retrieve information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services and options for those services. Robles also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s). This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s));
- *displaying the pieces of service information on a display* (at least Page 4, Paragraph [0039]; Figure 10 → as shown in the figure, device services information is displayed to the user for selection);

- *making linking information that links the processings to be executed by the currently-available service processing devices as a workflow based on a user operation on the display* (at least Figure 12A → Robles provides a user interface through which various services are listed (item 106) and can be selected and options set for each service by a user. Selected services and options are viewable by the user (item 108). Multiple services can be assembled (see Figures 12D-F) into a list of instructions. At this point, the user can choose to “link” these instructions by selecting the Preview button (item 112). Selecting the “ok” button (item 114) takes this assembled list of instructions to the next step (see Figure 13) where the system determines what devices can carry out the instructions. It is presumed that by selecting the “ok” button (item 114) that the user invokes the start of a linking process that will end with the creation of a workflow. By selecting the "ok" button (item 156) associated with this user interface, the user presumably adds the additionally selected content to the existing list and the process of “linking” the instructions and the devices together into a workflow is completed. The resulting workflow is then transmitted to the previously selected device(s) to be executed));

- *storing a plurality of pieces of the linking information as a plurality of workflows in a storage unit* (at least Page 3, Paragraph [0035] → Robles provides a cache for storing at least a list of preferred devices; Page 4, Paragraph [0038] → describes various computer storage mediums onto which the system of Robles can be embodied; Page 5, Paragraph [0045] → describes queues into which production plans (i.e. *workflows*) may be at least temporarily stored and allows a user to re-direct failed productions to other devices, which would require that the plan be retained);
- *transmitting, in response to a requirement from one of the currently-available service processing devices, the plurality of pieces of the stored linking information through the network to the one of the currently-available service processing devices so that a list of the plurality of workflows are displayed on a screen of the one of the currently-available service processing devices for a user selection, and one of the workflows is started based on the user selection* (at least Page 5, Paragraph [0045]; Figure 14 → Robles provides a means by which submitted (i.e. *transmitted*) production plans (i.e. *workflows*) can be displayed to a user and with which a user can interact to pause (e.g. stop/start), delete or re-direct. The first and third options act to start/re-start the selected plan(s)).

Robles fails to explicitly disclose:

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- *wherein the pieces of service information are displayed as icons, the user operation on the display included dragging and dropping icons corresponding to the pieces of service information corresponding to the processings to be executed to generate linked icons, and the step of making linking information included making the linking information in accordance with the linked icons.*

However, Sklut describes the creation of a “metaphor template” on a viewing screen with user interface (see Figures 12 and 13) as part of a method for designing a job ticket (i.e. workflow) for printing (see Abstract; Col. 17, line 11 through Col. 19, line 7) . The “metaphors” correspond to graphical icons which represent, for instance, real devices such as a printer, scanner, fax device, etc. These device metaphor elements can be linked with connector elements to construct a workflow or metaphor template. The device metaphors are coupled to the actual devices they represent and are also capable of indicating the current status/state/health of their associated devices (see Col. 19, line 60 through Col. 2, line 44; Figures 11-13). The user interface taught by Sklut appears as a single window and metaphors are added to the interface via pull-down or hierarchical menus and manipulated/arranged by the user (see Col. 18, lines 19-35) as opposed to the invention (see Applicants’ Figure 4) however this is a design choice. Both Sklut and the instant invention contain icon-based program and control components that can be dragged and dropped and connected to construct a workflow that can then be executed to carry printing processes.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Robles and Sklut as both inventions describe systems that allow a user to design and implement procedures based on a visual programming paradigm. Adding Young to Sklut provides Robles with a visual programming interface by which a user can design and execute a process such as a printing workflow.

In regard to dependent Claim 22, Robles discloses:

- *the transmitting comprises transmitting the plurality of pieces of the linking information in response to a request from one or more of the currently-available service processing devices* (at least Page 5, Paragraph [0045]; Figure 14 → Robles provides a means by which submitted (i.e. *transmitted*) production plans (i.e. workflows) can be displayed to a user and with which a user can interact to pause (e.g. stop/start), delete or re-direct. The first and third options act to start/re-start the selected plan(s)).

In regard to dependent Claim 23, Robles discloses:

- *the service information includes a service list* (Page 3, Paragraphs [0028], [0031-0035] → Robles teaches a services engine can retrieve information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services and options for those services. Robles also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s). This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s)).
- *pieces of interface information corresponding to the respective currently-available service processing devices* (Page 3, Paragraph [0028] → as noted above, Robles implies that instructions for generating user accessible controls (e.g., a GUI, which would presumably contain interface information since the GUI is controlling the device) pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s)).

In regard to independent Claim 24, Robles discloses:

Note: For purposes of examination, the phrase *“linking information making device”* is a device for generating workflows. The workflows combine information obtained by a *“service list acquisition unit/section,”* and a *“interface information acquisition unit/section,”* and are assembled or “linked together” by a *“linking information making unit/section,”* where information obtained by both the *“service list acquisition unit/section”* and *“interface information acquisition unit/section”* are presented in a user interface and are subject to user interaction to create or generate a workflow.

Item 2 of the system recited below is *“a linking information management server which saves a plurality of linking information made by the linking information making device.”* The Examiner cannot locate any support for such a component either in the Specification or Drawings. For purposes of examination, the Examiner will assume that this component acts to store generated workflows.

Item 3 of the system recited below is *“a client server which includes a GUI displaying a plurality of linking information saved in the linking information management server, selecting one of a plurality of linking information and inputting at least one parameter into selected linking information.”* The Examiner cannot locate any support for a *“client server”* component either in the Specification or Drawings. For purposes of examination, the Examiner will assume that what is described is simply a client with a GUI.

➤ *A document processing system, comprising:*

- (1) *a linking information making device* (at least Abstract → Robles describes a distributed document production system that allows a user to generate or produce a document using any number of available services available on any number of available devices) *which acquires a service list transmitted from a search device and pieces of interface information from a plurality of currently-available service processing devices via the search device, the linking information making device comprising:*
 - *a service search server comprising:*
 - *a service list acquisition section which acquires the service list expressing respective services each of which execute predetermined processings on document data, the respective services being provided by the plurality of currently-available service processing devices* (at least Page 3, Paragraphs [0028], [0031-0035] → Robles describes a services engine (i.e. *section*) that retrieves information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services, and options for those services. Robles also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be

included in this information obtained directly from the device(s). This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s));

- *a client terminal in communication with the service list acquisition section (see Figures 1 and 2 → Robles teaches a production client in communication with a production server which, in turn, is in communication with production devices), the client terminal comprising:*
 - *an interface information acquisition section which acquires, for each of the services being provided, a respective piece of the interface information including information about a method by which the corresponding predetermined processing is started (at least Page 3, Paragraph [0028] → Robles implies that instructions for generating user accessible controls (e.g., a GUI, which presumably contains interface information since the GUI is controlling the device) pertaining to each device, as well as the name or other location identifier of each device capable of providing the services, may be included in this information obtained directly from the device(s)), and*

- *a linking information making section which makes linking information to be used for linking the predetermined processings based on the interface information which has been acquired by the interface information acquisition section, and transmits the linking information, the linking information including information to be displayed on respective screens of one or more of the currently-available service processing devices and to be selected by a user operating one of the screens when the user instructs to start linking the predetermined processings (at least Figure 12A → Robles provides a user interface through which various services are listed (item 106) and can be selected and options set for each service by a user. Selected services and options are viewable by the user (item 108). Multiple services can be assembled (see Figures 12D-F) into a list of instructions (the beginnings of a workflow). At this point, the user can choose to “link” these instructions by selecting the Preview button (item 112). Selecting the “ok” button (item 114) takes this assembled list of instructions to the next step (see Figure 13) where the system determines what devices can carry out the instructions. It is presumed that by selecting the “ok” button (item 114) the user invokes the start of a linking process that will end with the creation of a workflow. By selecting the "ok" button (item 156) associated with this user interface, the user presumably adds the*

additionally selected content to the existing list and the process of “linking” the instructions and the devices together into a workflow is completed. The resulting workflow is then transmitted to the previously selected device(s) to be executed)); and

- *an instruction sheet management server comprising:*
 - *a management section which stores the transmitted linking information and further transmits the stored linking information to the one or more of the currently-available service processing devices for displaying on the screen based on a request from the currently-available service processing devices (at least Figure 14 → Robles depicts a production manager that allows the user to obtain the status of devices carrying out their assigned processing(s) on selected documents. The user can interact with this interface),*

Robles fails to disclose:

- *wherein the client terminal further comprises a display which displays a first window including a first icon corresponding to first interface information acquired by the interface information acquisition section, a second window including a second icon corresponding to a linking pattern, and a third window including linked first and second icons dragged and*

dropped from the first and second windows by the user; the linking information making section makes the linking information in accordance with the linked first and second icons in the third window.

However, Sklut describes the creation of a “metaphor template” on a viewing screen with user interface (see Figures 12 and 13) as part of a method for designing a job ticket (i.e. workflow) for printing (see Abstract; Col. 17, line 11 through Col. 19, line 7) . The “metaphors” correspond to graphical icons which represent, for instance, real devices such as a printer, scanner, fax device, etc. These device metaphor elements can be linked with connector elements to construct a workflow or metaphor template. The device metaphors are coupled to the actual devices they represent and are also capable of indicating the current status/state/health of their associated devices (see Col. 19, line 60 through Col. 2, line 44; Figures 11-13). The user interface taught by Sklut appears as a single window and metaphors are added to the interface via pull-down or hierarchical menus (see Col. 18, lines 19-35) as opposed to the invention (see Applicants’ Figure 4) however this is a design choice. Both Sklut and the instant invention contain icon-based program and control components that can be dragged and

dropped and connected to construct a workflow that can then be executed to carry printing processes.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Robles and Young as both inventions describe systems that allow a user to design and implement procedures based on a visual programming paradigm. Adding Young to Robles provides Robles with a visual programming interface by which a user can design and execute a process such as a printing workflow.

Based on the **Note** and interpretation above, Robles does not appear to allow for the storage of generated workflows by at least a user within the Graphical User Interface. However, one of ordinary skill in the art at the time of invention would realize that submitted and executed workflows must at least be temporarily stored; otherwise they would not exist to be executed.

Sklut, however does allow a user within the user interface to save workspaces so that they may be used again (see Col. 18, lines 46-60) and therefore teaches:

- *(2) a linking information management server which saves a plurality of linking information made by the linking information making device.*

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Robles and Sklut as both inventions are related to the construction of code to carry out specific functions. Adding

the disclosure of Sklut provides the benefit of allowing a user to save and re-use previously constructed codes.

Robles discloses:

- *(3) a client server which includes a GUI displaying a plurality of linking information saved in the linking information management server, selecting one of a plurality of linking information and inputting at least one parameter into selected linking information (at least Figures 6 and 12A → Robles provides to a client a GUI which allows the user to construct a workflow by interacting with, and providing input to services (e.g., setting printer speed to 12 PPM as illustrated). The service options were previously obtained/stored from the connected devices);*
- *(4) a linking processing server which executes the linking information inputted the parameter (at least Pages 2-3, Paragraphs [0025] and [0029]; Figure 6 → Robles describes a Production server which administers production requests which includes a Production engine which directs selected devices to execute and produce a document); and*
 - *(5) a plurality of currently-available service processing devices which provide services for executing processings of document data in accordance with the linking information executed by the linking processing server and transmit the pieces of the interface information to the search device (at least Page 3, Paragraphs [0028], [0031-0035] → Robles describes a services engine (i.e.*

section) that retrieves information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services, and options for those services. Robles also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s). This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s). Additionally, the services information provided by the devices are provided to the user for selection and subsequent submission for execution on the devices.),

- *the search device provided with:*
 - *a service information storage section for storing the pieces of the interface information which have been transmitted from currently-available service processing devices (at least Page 3, Paragraph [0028] → Robles teaches a services database is available to provide electronic storage to device services/options available on a network or elsewhere);*

- *a search section for searching services corresponding to services, for which search has been requested, using the pieces of the interface information which have been stored in the service information storage section (at least Page 3, Paragraph [0028] → Robles describes a services engine that retrieves (after locating) information on services directly, or alternatively obtains the information from the services database); and*
- *a transmission section which transmits the service list based on the search results of the search section (at least Page 3, Paragraph [0031] → Robles teaches a device selector 60 queries services database 38 or devices 16 directly and identifies a device or devices 16 capable of providing the selected services. In other words, the devices are “searched” for, identified, and their available services, options, interface information is transmitted back to the system such that the interface generator 43, can generate a user interface with user accessible controls for selecting between the identified device or devices).*

Claims 14-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robles in view of Sklut, and in further view of Roche (U.S. Patent Application Publication No. 2004/0039647 filed 07/18/2001, Published 02/26/2004).

In regard to dependent Claim 14, Robles and Sklut fail to disclose:

- *the linking information is a file in an XML format.*

However, Roche discloses *the linking information is a file in an XML format* (Figures 14-18 → Figure 14 depicts an XML-based Work Order containing, in addition to other information such as what to print and where, how to print (1402). This is further described in Figure 17 and represents the parameters needed by a device (and presumably obtained by the system from the device) embodied in an XML format).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Robles, Sklut and Roche since all three inventions are related to facilitating the printing of content to devices. Adding the disclosure of Roche provides the benefit of using the implicit structure of XML to describe aspects of the overall print job.

Regarding dependent Claims 15, 16 and 21, Claims 15, 16 and 21 merely recite a method, and programs on recording mediums operable (executable) on the device of Claim 14. Thus, Robles in view of Sklut and Roche discloses every limitation of Claims 15, 16 and 21, and provides proper motivation, as indicated in the above rejection of Claim 14.

Response to Arguments

Applicant's arguments with respect to claims 1-7 and 14-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Blackwell whose telephone number is (571)272-4089. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/James H. Blackwell/
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/DOUG HUTTON/
Supervisory Patent Examiner, Art Unit 2176